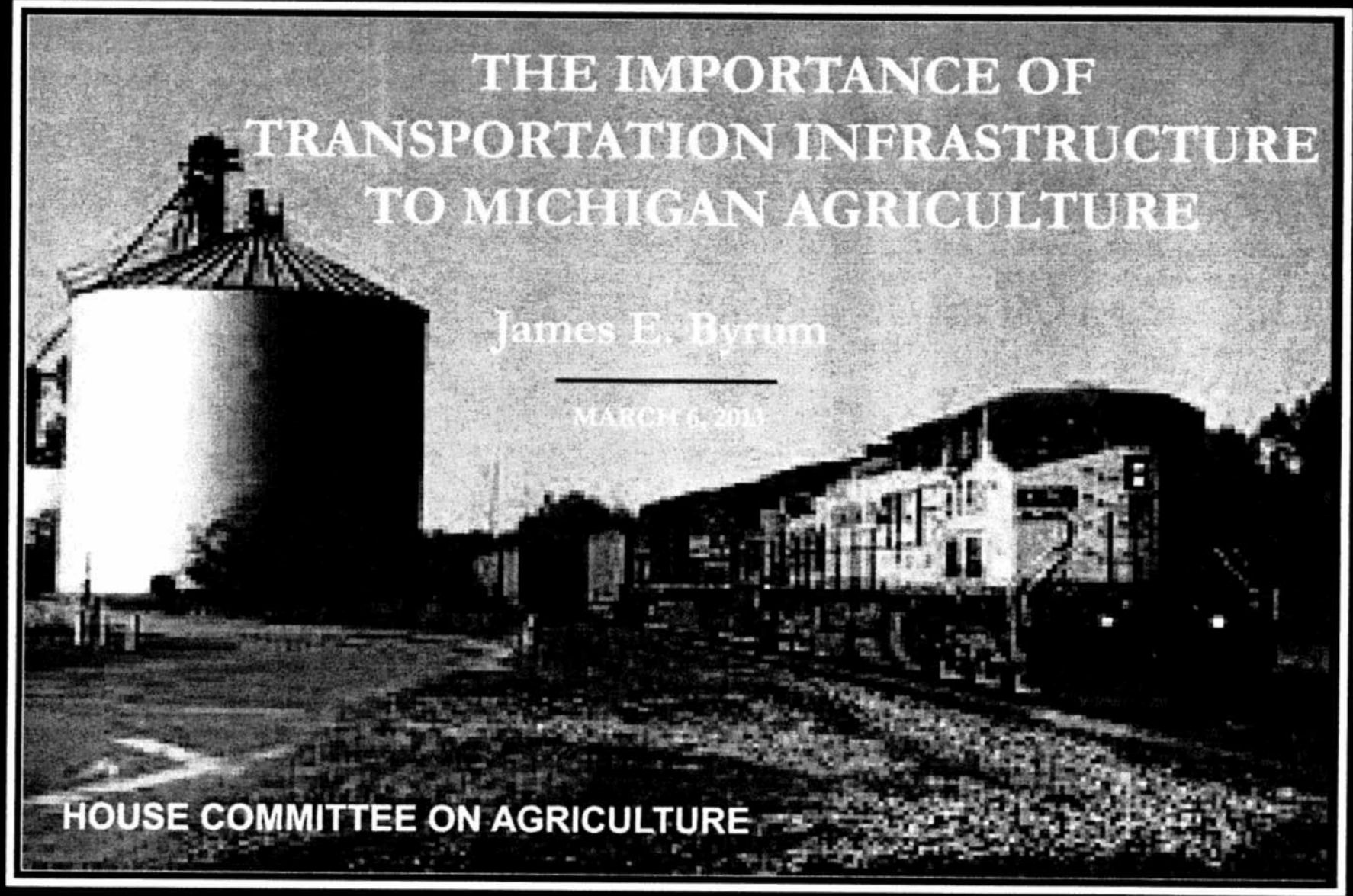


AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

Corn	Acres	Yield[1]	Production[2]
1970	1,730,000	81	140,130,000
2010	2,450,000	150	367,500,000
Soybeans			
1970	515,000	26	13,390,000
2010	2,100,000	45	94,500,000
Wheat			
1970	495,000	39	19,305,000
2010	510,000	70	35,700,000
Total Bushels			
1970	2,740,000		172,825,000
2010	5,060,000		497,700,000

[1] bushels/acre [2] bushels

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

Corn	Acres	Yield[1]	Production[2]
2010	2,450,000	150	367,500,000
2025	2,662,000	250	666,500,000
Soybeans			
2010	2,100,000	45	94,500,000
2025	2,282,500	65	148,362,500
Wheat			
2010	510,000	70	35,700,000
2025	555,500	110	61,105,000
Total Bushels			
2010	**5,060,000**		**497,700,000**
2025	**5,500,000**		**874,967,500**

[1] bushels/acre [2] bushels

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Infrastructure Needs
  - Fertilizer Storage and Handling
  - Grain Receiving, Storage and Handling
  - Transportation Needs

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

Truck (doubles)	1,500 bushels
Rail Hopper Car	3,500 bushels
90 Car Unit Train	315,000 bushels
Vessel	600,000 - 750,000 bushels
Truck Van Trailer	40,000 pounds of freight
Rail Box Car	156,000 pounds of freight

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Roads and Bridges - Issues
  - Reduced Weight Limits
  - Poor Construction
  - Grain Hauling
  - Equipment

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Roads and Bridges – Grain Hauling

1970 Gravity Wagon	17,000 Pounds
1990 Tandem Trucks	30,800 Pounds
2013 Hopper Trailers	67,200 Pounds
Doubles	84,000 Pounds

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- TRACTORS

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Roads and Bridges – Equipment

TRACTORS

1945 International M	5,000 Pounds
1965 3020 John Deere	8,500 Pounds
2013 9200 John Deere	31,000 Pounds

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- COMBINES

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Roads and Bridges – Equipment

COMBINES

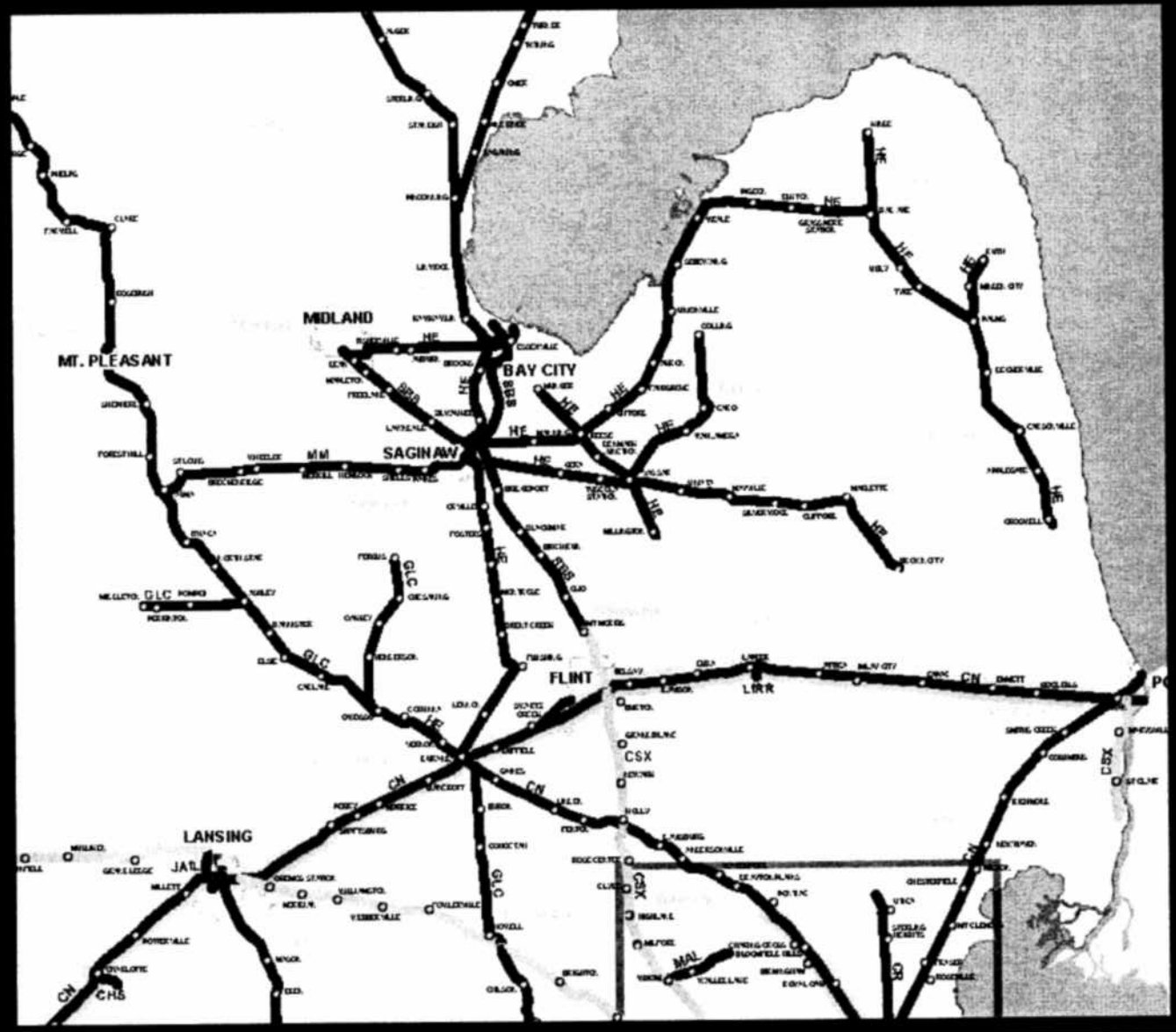
1970 John Deere 95	7,000 Pounds
1985 John Deere 7700	14,650 Pounds
2013 John Deere S 670	18,000 Pounds

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Roads and Bridges – Equipment

COMBINE BIN CAPACITY

1970 John Deere 95	5,000 Pounds
1985 John Deere 7700	10,000 Pounds
2013 John Deere S 670	22,000 Pounds



AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

Corn	40,000,000 bushels annually
Soybeans	11,000,000 bushels annually
Wheat	11,000,000 bushels annually
Dry Beans	3,000,000 hundredweight annually

* Huron, Tuscola and Sanilac Counties

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

Corn	50% by rail	20,000,000 bushels
Soybeans	80% by rail	9,000,000 bushels
Wheat	40% by rail	4,400,000 bushels
Dry Beans	50% by rail	1,560,000 hundredweight

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

		Trucks	Rail
Corn	20,000,000 bushels	13,300 *1	5,700 *2
Soybeans	9,000,000 bushels	6,000	2,600
Wheat	4,400,000 bushels	3,000	1,250
Dry Beans	1,500,000 hundredweight	3,750 *3	950 *4

*1 1,500 bushel, double trailer grain trains

*2 3,500 bushel rail hopper car

*3 40,000 van semi (can't haul larger loads because these are shipped outside of the state of Michigan

*4 156,000 pound railroad box car

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

MOVEMENT OF AGRICULTURAL PRODUCTION

Currently moved by 9,550 rail hopper cars

If switched to trucks

22,300 trucks!

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

22,300 Trucks at 80 feet

1,784,000 feet of trucks, or 340 miles of trucks stretched end to end, or a solid convoy of trucks that would stretch from Lansing to Saginaw, and back, TWICE ! *

* 22,300 grain trucks (doubles), 80 feet long, and 950 semi trucks with van trailers, 60 feet long

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

Hauling grain by truck instead of rail would increase the cost of transportation from the Thumb to destination by an estimated $.50 per bushel.

33,4000,000 bushels @ $.50 = 16,700,000

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

Hauling dry beans by truck instead of rail would increase the cost of transportation from the Thumb to destination by an estimated $10 per hundredweight.

1,500,000 hundredweight @ $10 = 15,000,000

An annual Increase in Transportation Cost for Corn, Soybeans, Wheat and Dry Beans $31,700,000

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

$31.7 million in **EXTRA COSTS without rail**

This additional cost will appear as an expense to producers, and a decrease in their income!

Just from Huron, Tuscola and Sanilac Counties Every Year!

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Not enough trucks
- Road and infrastructure damage
- Road congestion
- Safety

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

	Bushels[1]	% by Rail	Total Bushels by Rail[1]
Corn	302,430,000	50	121,882,500

[1] Annually

- 121,882,500 bushels @ $.50 = $60,941,250
- 121,882,500 bushels ÷1500 bushels per truck = 81,255 trucks
- 121,882,500 bushels ÷ 3500 bushels per rail car = 34,825 rail cars

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

	Bushels[1]	% by Rail	Total Bushels by Rail[1]
Soybeans	86,700,000	80	61,135,000

[1] Annually

- 61,135,500 bushels @ $.50 = $30,567,500
- 61,135,500 bushels ÷1500 bushels per truck = 40,760 trucks
- 61,135,500 bushels ÷ 3500 bushels per rail car = 17,465 rail cars

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

	Bushels[1]	% by Rail	Total Bushels by Rail[1]
Wheat	34,615,000	40	13,846,000

[1] Annually

- 13,846,000 bushels @ $.50 = $6,923,000
- 13,846,000 bushels ÷1500 bushels per truck = 9230 trucks
- 13,846,000 bushels ÷ 3500 bushels per rail car = 3960 rail cars

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

	cwt[1]	% by Rail	cwt by Rail[1]
Dry Beans	3,000,000	50	1,500,000

[1] Annually

- 1,500,000 cwt @ $10.00 cwt = $15,000,000
- 1,500,000 cwt ÷4000 lbs per truck = 3700 trucks
- 1,500,000 cwt ÷ 160,000 lbs per rail car = 950 rail cars

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

$$$ IMPACT 194,000,000

Approximately 160,000 trucks

vs.

Approximately 67,000 rail cars

Almost 2,400 miles of trucks

EVERY YEAR!

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Water Transportation

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Water Transportation
  - Dredging
  - Ballast Water Discharge
  - Barges
  - Age and Availability on Vessels and Barges

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Comprehensive Transportation Solution
  - Roads and Bridges
  - Railroads
  - Water Transportation

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

- Comprehensive Transportation Solution
  - Help Maintain and Improve the Life of Roads and Bridges
  - We can't find enough drivers
  - The Lack of a Solid Transportation Infrastructure will limit the growth of our industry

AGRICULTURAL TRANSPORTATION INFRASTRUCTURE

Logistics and Transportation are the Life Line of Michigan Agriculture and Will Drive our Continued Growth and Success